

Supplementary Table 1. RNAi lines from screen that have phenotypes in other systems in *Drosophila*.

Gene	RNAi	Stock center	Construct ID	Other systems
alpha-catenin (α-cat)	20123	VDRC	GD8808	Pupal lethal under pnr-GAL4 and lethal under tubulin driver ^{1,2}
	40882	VDRC	GD8808	Pupal lethal under pnr-GAL4 ¹ ; rotation defects in male genitalia ⁴ ; epithelial defects in the ovaries when driven by <i>traffic jam</i> -Gal4 ⁷
	107298	VDRC	KK107916	Epithelial defects in the ovaries when driven by <i>escargot</i> (<i>esg</i>)-GAL4 and <i>traffic jam</i> -Gal4 ^{3,7} ; rotation defects in male genitalia ⁴
Dachsous (ds)	36219	VDRC	GD14350	Genome-wide bristle screen ¹ ; larval hindgut in LR asymmetry ⁵ ; size defect, wing imaginal disc and adult wing ^{6,8,9,13} ; cardiac cells ¹⁰ ; wing shape and local hair polarity ¹¹ ; lethal under <i>esg</i> -GAL4 ¹⁷
	4313	VDRC	GD2646	Adult wing and wing disc abnormality ^{12,13,14} ; larval hindgut in LR asymmetry ⁵ ; reduced escort cell extension ⁶⁶
	32964	BL	HMS00759	Larval ventral nerve cord ¹⁵ ; anterior wing margin bristle apical rotation ¹⁶ , abdomen PCP ¹⁸ ; lethal under Act5C-GAL4 ¹⁷ ; larval/pupal lethal and flight muscle defect under c587 and nos-GAL4s ^{20,67}
Dreadlocks (dock)	37524	VDRC	GD4034	Agglutination of larval nephrocytes ¹⁹
	27728	BL	JF02810	Embryonic CNS (anterior corner cell) and adult CNS ²¹ ; lethal under Act5C-GAL4, nos-GAL4 and c587-GAL4 ^{17,20}
Fat	108863	VDRC	KK101190	Larval hindgut in LR asymmetry ⁵ ; abnormal adult wing and wing disc ^{23,24} ; reduced escort cell extension ⁶⁶
	9396	VDRC	GD881	Genome-wide bristle screen ¹ ; larval hindgut in LR asymmetry ⁵ ; wing disc and adult wing ^{6,11,12,25,26,27,28} ; enterocytes ²⁹ ; larval brain and eye disc ³¹

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G protein alpha i subunit	40890	BL	HMS02138	ECM defects in 3 rd instar larvae ³⁰
	28150	VDRC	GD12576	Genome-wide bristle screen ¹ ; fly antennae for olfaction ³³
G protein alpha o subunit	34653	BL	HMS01129	Larval and adult brain ^{35,36} ; lethal under Act5C-GAL4 and MTD-GAL4 ^{17,37}
	110552	VDRC	KK109018	Octopaminergic neurons ³²
	19124	VDRC	GD8640	Genome-wide bristle screen ¹ ; embryonic lethal under elav-GAL4 ³⁸ ; Anterior Paired Lateral (APL) neurons and adult brain ^{40,32} ; gustatory receptors ³⁴ ; wing and notum ^{41,42} ; male courtship ⁴³
Gliotactin	37115	VDRC	GD1735	Genome-wide bristle screen ¹
	37116	VDRC	GD1735	Genome-wide bristle screen ¹
Lachesin (Lac)	35524	VDRC	GD12649	pupal lethal under pnr-GAL4 ¹
	107450	VDRC	KK107469	Epithelial defects during oogenesis ^{3,39} ; enhanced astrocyte seizure activity ⁴⁴ ;
	28940	BL	HM05151	lethal under Act5C-GAL4 ¹⁷
Liprin-alpha	106588	VDRC	KK10116	Fly eye tumor model (overexpression of a Notch ligand leads to benign overgrowths in the eyes) ⁴⁵ ; adult mechanosensory neurons ⁴⁶ ; neuronal defects ⁴⁷
Mesh	6867	VDRC	GD3140	Pupal lethal under pnrGAL4 ¹
Parvin	105356	VDRC	KK102567	Larval wing disc ⁴⁹ ; larval lethal under MEf2-GAL4 ⁵¹

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Roughest (rst)	27223	VDRC	GD14475	Genome-wide bristle screen ¹ , wing margin hair ⁴⁹
	27225	VDRC	GD14475	Larval optic lobe ⁵⁰
	951	VDRC	GD86	Genome-wide bristle screen ¹ , male genital disc and myoblasts around adult male genitalia ⁵²
Schizo	36625	VDRC	GD14895	Patterning of the eye ⁵³
	36627	VDRC	GD14895	Patterning of the eye ⁵³ ; flight defective ⁵⁴ ; suppression of larval eye disc tumors ⁶⁵
	106168	VDRC	KK103616	Neurons under elav-GAL4 ⁵⁵ ; suppression of larval eye disc tumors ⁶⁵
	39060	BL	HMS01980	Neurons under elav-GAL4 ⁵⁵ ; suppression of larval eye disc tumors ⁶⁵ ; pupal lethal under c587-GAL4 ²⁰
Shroom	47147	VDRC	GD16363	Retinal degeneration ⁵⁸
	100672	VDRC	KK106863	Wing imaginal disc ⁵⁶
Symplekin (Sym)	33469	VDRC	GD9722	Pupal lethal under pnrGAL4 ¹
	33470	VDRC	GD9722	Pupal lethal under pnrGAL4 ¹ ; partial lethal under elav-GAL4 and lethal under Mef2-GAL4 ^{38,54}
	39041	BL	HMS01961	Mitotic spermatogonia ⁵⁷
Vulcan	46230	VDRC	GD16319	Increased astrocyte seizure activity ⁴⁴
Wnt4	38011	VDRC	GD5347	Pain response defects ³⁸
	38010	VDRC	GD5347	Larval cardiac cells ¹⁰

Gene	RNAi	Stock center	Construct ID	Other systems
	104671	VDRC	KK102348	Larval cardiac cells ¹⁰ ; ostia progenitor cells ⁵⁹ ; egg chamber defects during oogenesis under traffic jam-GAL4 ³
	29442	BL	JF03378	Wing disc and adult wing ⁶⁰ ; germline stem cell defects in ovaries under c587-GAL4 ⁶¹
Wunen	6446	VDRC	GD1640	Caudal visceral mesoderm cell migration (weak phenotype) ⁶² ; bacterial infection induced <i>drosomycin</i> expression ⁶³ ; suppression of dystrophic muscle phenotype ⁶⁴

References are in Supplementary File 2.